

Motorcycle Tool List:

Adjustable wrenches (also
called crescent wrenches)

Air ratchet

Allen wrench

Angled or remote

screwdrivers

Aviation snips

Ball peen hammer

Basic hand tools Beam-type torque wrench Bench grinder

Bench vise

Box-end wrenches Breaker bar

C-clamps

Center punches

Chisels

Clamps

Click-type torque wrench

Combination and rib-joint

pliers

Combination wrenches Compression gauge Cutting pliers

Deep sockets

Dial indicator

Drill

Drill bit

Drill press

Engine Control Module

(ECM)

Exhaust gas analyzer Feeler gauges

Files

Flare-nut or line wrench Flat chisel

Flat (or slot) tips.

Flex handles

Fuel injected (FI)

Hacksaws Hammers

Hex wrench

Hose clamp pliers

Impact screwdrivers

Locking or vise grip pliers

Mallet or soft-faced hammers

Metric Micrometers

Multi-meter

Needle nose pliers

Offset screwdrivers

On Board Diagnostics

(OBD-II)

Open-end wrenches Phillips screwdriver tips Pin and straight shank

punches

Plastic-faced hammer Pliers

Power impact wrenches Pozidrive tips

Precision measuring tools Pullers

Punches

Rechargeable cordless drills

Reed and Prince tips

Retaining-ring pliers

Rubber hammer

Screwdriver

Screw extractor

Service manuals

Sliding t-handles

Snips or shears

Socket wrenches

Specification manuals

Speed handles

Standard wrench Starting or aligning

Stubby screwdrivers

Taps and dies

Test light

Timing light

Torque wrenches

Torx tips

Torx wrench

Vernier caliper Vises

Wire stripper/crimper pliers

Wrenches

<p>CIP Code</p> <p>470611</p>	<p>Teacher Code:</p> <p>V479600</p>	<p>Motorcycle Maintenance and Repair Technology/Technician</p>	<p>A course that prepares individuals to repair, service, and maintain motorcycles and other similar powered vehicles. Includes instruction in lubrication and cooling systems, electrical and ignition systems, carburetion, fuel systems and adjustments of moving parts.</p>	<p>P</p>	<p>Industry Certification:</p> <p>NOCTI Test Code 1077 Skill Connect Assessment</p>	<p>Cluster:</p> <p>Transportation Distribution and Logistics (16)</p>	<p>Transportation Operations</p>	<p>CTSO:</p> <p>SkillsUSA</p>	<p>Skilled and Technical Sciences formerly T&I</p>
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MOT 100 Introduction to Motorcycles 3 Credits

Description:

Explores culture and history of motorcycles. Includes field trips to dealerships for student exploration into motorcycle industry.

Components: Lecture: 3 credits (45 contact hours)

Implementation: Fall 2008

Competencies (Tasks)/Student Outcomes:

Upon completion of this course, the student can:

1. Explain knowledge of early motorcycles.
2. Identify important developments in the motorcycle industry.
3. Explain the impact of foreign companies on the motorcycle industry.
4. Identify the key component of motorcycle construction.
5. Identify various motorcycle organizations, their projects and activities.
6. Identify different types of motorcycles.
7. Identify restrictions to access and speed in motorcycles.

Outline:

- I. History
 - A. Early milestones
 - B. The 20th century
 - C. The present
- II. Technical aspects
 - A. Construction
 - B. Fuel economy
 - C. Dynamics
- III. Social aspects
 - A. Subcultures
 - B. Mobility
 - C. Safety
- IV. Types of motorcycles
 - A. Street
 - B. Off road
 - C. Dual purpose
- V. Restrictions and definitions
 - A. Access and passenger restrictions
 - B. Speed restriction.

Learning Resources:

Walker, M (2004). *Motorcycle: Evolution, design, passion*. Baltimore, Maryland: John Hopkins University Press.

Dates of Actions:

Approved: May 2008

MOT 142 Basic Engines & Drive Systems 2 Credits

Description:

Explores professional work habits, proper use of hand and power tools, service manuals, basic engine and parts identification. Covers internal combustion engines, transmissions, fuel systems, and assembly and disassembly.

Integrated Components: Lecture: 1 credit (15 contact hours). Lab: 1 credit (30 contact hours)

Implementation: Fall 2008

Competencies (Tasks)/Student Outcomes:

Upon completion of this course, the student can:

1. Use proper tools to service an engine.
2. Demonstrate an understanding of camshaft design engines.
3. Demonstrate an understanding of single cylinder engines.
4. Demonstrate an understanding of twin cylinder engines.
5. Demonstrate an understanding of multi-cylinder engines.
6. Service all types of engines using proper techniques and tools.

Outline:

- I. Engines
 - A. Single cylinder engine
 - B. Twin cylinder engine
 - C. Multi-cylinder engine
- II. Transmissions
 - A. Single cylinder engine
 - B. Twin cylinder engine
- III. Fuel Systems
 - A. Fuel injection
 - B. Carburetor
- IV. Ignition Systems.
 - A. Electronic
 - B. Point type

Experiments/Activities:

1. Disassemble single, twin cylinder engines.
2. Assemble single, twin cylinder engines.
3. Inspect and repair pistons.
4. Inspect and repair valves.
5. Inspect and repair fuel injection systems.
6. Inspect and repair electronic systems.

Learning Resources:

Editors of Hot Bike Magazine. (2005). *American v-twin tech*. New York, NY: HP book.

Dates of Actions:

Approved: May 2008

MOT 156 Frames and Suspensions 2 Credits

Description:

Focuses on the design, operation, maintenance, and geometry of motorcycles. Explores basic principles of hydraulics and lubricants. Includes basic adjustments of all frame and suspension components.

Integrated Components: Lecture: 1 credit (15 contact hours). Lab: 1 credit (30 contact hours).

Implementation: Fall 2008

Competencies (Tasks)/Student Outcomes:

Upon completion of this course, the student can:

1. Change and repair wheels and tires.
2. Demonstrate proper maintenance techniques.
3. Demonstrate an understanding of frame design.
4. List types of frames.
5. Adjust steering systems.
6. Install shocks, springs, and swing arms.
7. Change drum and disc brakes.
8. Demonstrate an understanding of hydraulic and manual brakes.

Outline:

- I. Wheels and Tires
 - A. Basic wheel components
 - B. Tire maintenance and repair
- II. Frame and Suspension
 - A. Frame components
 - B. Suspension components
- III. Brake Systems
 - A. Brake designs
 - B. Servicing brakes systems

Experiments/Activities:

1. Repair wheel components.
2. Repair and install tires.
3. Inspect and service brake systems.
4. Inspect and repair suspensions
5. Inspect and repair frame components.

Learning Resources:

Gaetano, C. (2004). *Motorcycle design and technology*. Osceola, Wisconsin: Motorbooks International.

Dates of Actions:

Approved: May 2008

MOT 220 Diagnostics and Troubleshooting 2 Credits

Description:

Focuses on appropriate procedures used in diagnosing customer concerns.

Integrated Components: Lecture: 1 credit (15 contact hours). Lab: 1 credit (30 contact hours)

Implementation: Fall 2008

Competencies (Tasks)/Student Outcomes:

Upon completion of this course, the student can:

1. Demonstrate an understanding of service manuals.
2. Use proper equipment to diagnose a problem.
3. Identify problems.
4. Follow troubleshooting procedures.

Outline:

- I. Using Service Manuals.
 - A. Types of service manuals
 - B. Owner's manuals
- II. Diagnostic Procedures
 - A. Verifying and analyze the problem
 - B. Types of problems
- III. How to Troubleshoot
 - A. Troubleshooting steps
 - B. Service tips

Experiments/Activities:

1. Identify and use service manuals.
2. Utilize diagnostic equipment to analyze motorcycles.
3. Systematically troubleshoot problems to identify and resolve.

Learning Resources:

Everitt, C. (2007). *How to repair your motorcycle*. Osceola, Wisconsin: Motorbooks International.

Dates of Actions:

Approved: May 2008

MOT 200 Advanced Engines and Drive Systems 2 Credits

Description:

Develops skills for engine and transmission overhaul. Emphasizes assembly and disassembly of all components of engine and transmission.

Integrated Components: Lecture: 1 credit (15 contact hours). Lab: 1 credit (30 contact hours)

Pre-requisites: MOT 142 or permission of instructor.

Implementation: Fall 2008

Competencies (Tasks)/Student Outcomes:

Upon completion of this course, the student can:

1. Disassemble engine components.
2. Inspect engine components.
3. Demonstrate shop safety while conducting disassembly and reassembly.
4. Disassemble transmission components.
5. Inspect transmission components.

Outline:

- I. Camshaft Arrangement.
 - A. Single overhead camshaft (SOHC)
 - B. Dual overhead camshaft (DOHC)
 - C. Camshaft design
 - D. Valve designs
- II. Pistons, Crankshafts, and Cylinders
 - A. Single cylinder engine
 - B. Twin cylinder engine
 - C. Cylinder design and construction
 - D. Piston construction and design
 - F.. Piston rings (Two & Four-Stroke)
- III. Crankshaft Configurations
 - A. Single-cylinder
 - B. Twin-cylinder
- IV. Fuel Systems
 - A. Fuel injection
 - B. Carburetor
- V. Ignition Systems
 - A. Electronic
 - B. Point type

Experiments/Activities:

1. Disassemble twin and multi-cylinder engines.
2. Assemble twin and multi-cylinder engines.
3. Repair single overhead camshaft.
4. Repair dual overhead camshaft.
5. Inspect and repair fuel injection systems.
6. Inspect and repair electronic systems.

Learning Resources:

Dixon, J. (2005). *The high performance two-stroke engine*. Newbury Park, CA: Haynes Publishing.

Dates of Actions:

Approved: May 2008

MOT 234 Performance Machining and Welding 2 Credits

Description:

Explores standard and performance-machining practices associated with performance motorcycles. Includes machining practices associated with valve jobs, cylinder boring and honing, big bore kits, and cylinder head porting and polishing. Covers basic welding and weld inspection practices.

Integrated Components: Lecture: 1 credit (15 contact hours). Lab: 1 credit (30 contact hours)

Implementation: Fall 2008

Competencies (Tasks)/Student Outcomes:

Upon completion of this course, the student can:

1. Demonstrate proper welding techniques.
2. Demonstrate an understanding of welding equipment.
3. Demonstrate basic machining practices associated with valve jobs and cylinder head porting and polishing.
4. Demonstrate proper cylinder boring and honing techniques.
5. Identify proper welds.
6. Use proper tools for each task.
7. Demonstrate the proper care and handling of machining tools.
8. Demonstrate the proper care and handling of welding tools.

Outline:

- I. Welding Operations
 - A. Preparation of equipment
 - B. Basic welding and cutting operations
- II. Machining Operations
 - A. Set up of power equipment
 - B. Proper care and use of tools
 - C. Basic machining practices

Experiments/Activities:

1. Setup welding project using proper safety techniques.
2. Perform aluminum welds.
3. Setup machining project using proper safety techniques.
4. Clean and maintain machining equipment.
5. Perform basic machining operations.

Learning Resources:

Finch, R. (2005). *Performance welding handbook*. Osceola, Wisconsin: Motorbooks.

Dates of Actions:

Approved: May 2008

DESCRIPTION: This course introduces non-majors to the basic physics of electricity. Students apply Ohm's Law; measure resistance, voltage, ohms, watts and amps; construct various types of electrical circuits; select wire and fuse sizes; and learn to trouble shoot an electric motor and coil.

IMPLEMENTATION DATE: Fall 2002

COMPETENCIES/TASKS:

Upon completion of this course, the student can:

1. Practice electrical safety
2. measure ohms with an ohmmeter
3. measure voltage with a voltmeter
4. measure amps with an ammeter
5. measure watts with a wattmeter
6. solve electrical circuit problems using Ohm's Law
7. draw and interpret electrical symbols
8. demonstrate series circuits, parallel circuits and series-parallel circuits
9. select wire and fuse sizes

COURSE OUTLINE:

- I. Introduction to Electricity for Non-Majors
 - A. Basic physics of electricity
 - B. Measure resistance
- II. Troubleshooting
 - A. Electric motor
 - B. Coil

APPROVED: MARCH 2001

REVISED:

The Kentucky Tech Curriculum
Office of Career and Technical Education
Equal Education Opportunities M/F/D

TASK LIST

Effective: 12/1/2008

**WPP
200**

Workplace Principles

Course Description

Workplace Principles examine the changing workforce and the skills needed to adapt to constantly changing demands and expectations. The course includes, but is not limited to, problem solving, teamwork, time management, and self-management skills. Job-seeking and job-retention skills are taught through the development of resumes and job search materials. Maximum benefit is received if this course is taken in the latter part of the student's course work.

Prerequisites: None

TASK LIST

- 1 Describe and apply the problem-solving processes independently and in groups
- 2 Describe the importance of teamwork and apply teamwork skills
- 3 Identify barriers to full team participation (sexual harrassment, diversity, Americans with Disabilities Act, inhibiting behaviors)
- 4 Apply conflict resolution skills in team situations (i.e., workplace violence)
- 5 Describe the importance of time and self-management in the workplace
- 6 Describe personal performance skills (i.e., appropriate dress, business protocol, personality traits, customer relations skills, and professional behavior)
- 7 Describe the steps to take advantage of transition opportunities (i.e., lifestyle change, employment change)
- 8 Develop an employment portfolio including a cover letter, resume, and reference page
- 9 Identify sources for job leads and employer contacts
- 10 Complete application forms
- 11 Prepare and practice for job interviews
- 12 Practice job follow-up strategies (job acceptance and job rejection)
- 13 Review pre-employment tests
- 14 Identify policies and procedures for a drug-free workplace, workers' compensation, Family Medical Leave Act, grievance policy, unemployment compensation, and business ethics
- 15 Identify ergonomics and understand why ergonomics is important from a health point of view.

- 16 Demonstrate accountability of and the safe and responsible use of company resources, office equipment, machines, etc.
- 17 Apply Internet etiquette and safety
- 18 Identify safety rules applicable to this course and demonstrate appropriate observance of said rules, including but not limited to, trip hazards, electrical cords and outlets, evacuation procedures for emergency situations (including fire, tornado, bomb threat, earthquake, etc.), lockdown procedures for emergency situations, location and contents of first aid kit, MSDS sheets, etc.

MOTORCYCLE HAND TOOLS:

Adjustable Wrench 6"	Snap on ADH6		\$31.35
Adjustable Wrench 12"	Snap on ADH12		\$52.09
Blow Gun	Snap on JT11AS		\$11.63
Hex Wrench Set	Snap on AW1015DHK		\$36.34
Hex Wrench Set	Snap on AWM1190DHK		\$37.20
Pliers, Angle Nose	Snap on 208BCP		\$16.50
Battery Cable Clamp Puller	Snap on CJ92		\$35.44
Chisel	Snap on PPC14B		\$16.13
Chisel	Snap on PPC812B		\$12.64
Chisel	Snap on PPC832B		\$37.99
Punch/Chisel Holder	Snap on PPC5A		\$23.63
Pick Up Tool	Snap on GA353B		\$11.66
Combination Wrench ¼ inch 12 point	Snap on OEX8B		\$19.20
Combination Wrench 5/16 12 point	Snap on OEX10B		\$19.31
Wrench Set, Combination	Snap on SCEX711		\$344.40
Combination Wrench, short, 7mm 12 point	Snap on OEXM7B		\$17.10
Combination Wrench, short, 8mm 12 point	Snap on OEXM8B		\$17.10
Combination Wrench, short 9mm, 12 point	Snap on OEXM9B		\$17.10
Wrench set, Metric	Snap on SCEXM710		\$255.71
Metric Crow Foot Wrench set	Snap on 210FCOMA		\$153.60
Wrench Set Crow Foot	Snap on 211FCOA		\$180.26
Feeler gauge set	Snap on FB325A		\$5.40
Ear Protectors	Snap on GA3000A		\$21.26
Feeler Gauge	Snap on FBM320		\$6.04
File 6 inches	Snap on 6MA		\$4.28
File 12 inches	Snap on 12 MA		\$10.46
File Half Round 12	Snap on 12 HR		\$17.53
File, Round	Snap on 6R		\$5.06
File Round 12	Snap on 12R		\$10.46
Flare Wrench Set	Snap on RXFS605B		\$119.14
Flare Wrench Metric set	Snap on RXFMS606B		\$152.85
Flashlight	Snap on ECF35		\$13.50

Fuse Tongs	Snap on FZ4B		\$2.33
Hacksaw	Snap on HS18A		\$23.03
Ball Peen Hammer 16 oz	Snap on BP16B		\$14.96
Bronze Hammer	Snap on HBBT16		\$43.50
Dead Blow Hammer	Snap on HBF16		\$23.29
Plastic Tip Hammer	Snap on HEPT16		\$35.44
Rubber Mallet	Snap on BF620C		\$14.70
Test leads	Snap on TL624G		\$39.75
Pick up tool	Snap on PT28E		\$7.31
Pliers, Slip Joint	Snap on 46ACP		\$18.30
Pliers, Hose Clamp	Snap on HCP10		\$13.35
Pliers, Locking	Snap on VGP11210		\$11.03
Needle Nose Pliers	Snap on 96BCP		\$26.81
Diagonal Cutters	Snap on 86CP		\$21.00
Adjustable Pliers	Snap on 91ACP		\$21.19
Pry bar	Snap on 1250		\$28.69
Pry bar 18"	Snap on SPB18A		\$30.28
Center Punch	Snap on PPC4A		\$12.98
Pin Punch	Snap on PPB816A		\$18.64
Punch Pin	Snap on PPC104A		\$8.63
Punch Pin	Snap on PPC106A		\$9.83
Punch Pin	PPC106A		
Punch Pin	Snap on PPC108A		\$11.78
Punch Pin	Snap on PPC110A		\$13.76
Punch Starter	Snap on PPC204A		\$10.61
Punch Starter	Snap on PPC206A		\$11.78
Punch Starter	Snap on PPC208A		\$13.76
Safety Glasses	Snap on GLASS1R	25 recommended \$10.46 each	\$261.50
Carbon Scraper	Snap on CSA10C	2 recommended \$16.65 each	\$33.30
Putty Knife	Snap on PK52	5 recommended \$7.16 each	\$35.80
Screwdriver	Snap on SDD1	4 recommended	\$8.96
Screwdriver	Snap on SDD4	4 recommended	\$11.44
Screwdriver	Snap on SDD6	4 recommended	\$14.44
Screwdriver	Snap on SGD4120A	4 recommended	\$16.01
Offset Screwdriver	Snap on KLEV02		\$5.44
Phillips Screwdriver	Snap on SDDP21	4 recommended \$8.96	\$35.84
Phillips Screwdriver	Snap on SDDP22	4 recommended \$8.63	\$35.52

Phillips Screwdriver	Snap on SDDP61	4 recommended \$12.53	\$50.12
Phillips Screwdriver	Snap on SDDP62	4 recommended \$13.13	\$52.52
Screwdriver	Snap on SGDP101A	4 recommended \$13.88	\$55.82
Phillips Offset Screwdriver	Snap on 012C		\$8.36
Impact Driver Set	Snap on 203EPIT		\$134.36
Pozi Drive Set	Snap on SDDZ50A		\$76.91
Torx Set	Snap on SDTX90A0		\$116.40
Torx Socket Set	Snap on 212EFTXY		\$182.74
Phillips Screw Starter	Snap on S8M6A		\$6.04
Screw Starter Flat Tip	Snap on SSM5A		\$7.73
Socket Set Metric	Snap on 110TMY		\$62.93
Socket Set Deep	Snap on 110STNY		\$99.30
Socket Set Metric Shallow	Snap on 113TMY		\$93.19
Socket Set Metric Deep	Snap on 113STMMY		\$137.06
Universal Joint	Snap on TMU8B		\$23.63
4" Extension	Snap on TMXK4		\$10.65
6" Extension	Snap on TMXK60		\$11.21
¼ Ratchet	Snap on T936	8 recommended	\$315.04
		\$39.38	
Socket Set Shallow	Snap on 211FSY		\$86.40
Socket Set Deep	Snap on 211SFSY		\$132.26
Socket Set Metric Shallow	Snap on 212FSMY		\$91.76
Socket Set Metric Deep	Snap on 212SFSMY		\$138.53
Extension 3"	Snap on FXK3	3 recommended \$12.00	\$36.00
Extension 6"	Snap on FXK6	3 recommended \$16.13	\$48.39
Extension 11"	Snap on FXK11	3 recommended \$19.13	\$57.39
Extension 18"	Snap on FX18	3 recommended \$27.19	\$81.57
Ratchet Swivel Head	Snap on FLF936	3 recommended \$69.94	\$209.82

Ratchet 3/8 Drive	Snap on F936	10 recommended \$50.63	\$506.30
Spark Plug Socket	Snap on S9706KRA	5 recommended \$18.56	\$92.80
Spark Plug Socket 13/16	Snap on S9704KR	5 recommended \$19.50	\$97.50
Speeder	Snap on F4LB		\$25.69
Universal Joint 3/8	Snap on FUSA		\$25.88
Flex Socket	Snap on FS12B		\$24.38
6 pt Flexible Socket Set	Snap on 206AFSA		\$145.88
Socket Set Metric	Snap on 209FUMY		\$249.98
Socket Set Shallow	Snap on 313TWYA		\$148.99
Socket Set Deep	Snap on 313TSYA		\$245.74
Socket Set Standard Metric	Snap on 318SWMY		\$211.65
Socket Metric Deep 10 mm	Snap on TSM10A		\$16.50
Socket Set Metric Deep	Snap on 313TSMYA		\$232.43
Socket Metric Deep 25 mm	Snap on TSM25		\$23.21
Socket Metric Deep 11 mm	Snap on SM11A		\$17.21
Extension 3 ½	Snap on SXK3	3 recommended \$16.88	\$50.64
Extension 5"	Snap on SXK5	3 recommended \$18.75	\$56.25
Extension 11"	Snap on SXK11	3 recommended \$28.28	\$84.84
Breaker Bar	Snap on SN15B	3 recommended \$58.69	\$176.07
Ratchet ½" Drive	Snap on S936	3 recommended \$79.13	\$237.39
Gap Gauge	Snap on FB360C		\$3.68
12' Tape	Snap on YASG153		\$13.20
Test Light	Snap on CT4G	5 recommended \$36.08	
Pressure Gauge	Snap on YA106		\$5.63
Torque Wrench	Snap on QD2R200		\$167.63
Torque Wrench	Snap on QD2R100		\$167.63
Torque Wrench	Snap on QD3R250		\$192.75
Wire Brush	Snap on AC58C		\$4.54
Tool box	Snap on KRA4107DX	4 recommended	\$1,396.50

General Service Set ¼ inch with Ratchet	Snap on 144TMPB	2 recommended	\$565.50
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\$10,196.86 Estimated Total for Hand Tools.

MOTORCYCLE LAB EQUIPMENT:

Workbenches (7 Recommended)	Snap on jamwc360	30dx60wx35h \$370.85 each	\$2,595.95
Vise (3 Recommended)	Snap on wv676	Swivel Base	\$152.55
Tire Changer	Snap on eewh512ae	110v 60hz	\$3,546.68
Air Hammer Set	Snap on phg3050ch4a		\$362.96
Air Compressor	Snap on bra10312h	230V, three phase	\$3,746.25
Air Hose (3 Recommended)	Snap on im2005	25 feet \$52.80 each	\$15,840
Pressure Regulator (2 Recommended)	Snap on ahr426		\$56.96
3/8 Air Ratchet	Snap on far72c		\$254.25
Drill 3/8	Snap on etb1300		\$78.71
Drill ½	Snap on etb1600		\$79.58
Hydraulic Press	Snap on eneiph1240		\$1,148.40
Impact Socket set	Snap on 212imfylv	All	\$99.23
Impact Socket set	Snap on 217imfmylm	Different	\$125.89
Impact Socket set	Snap on 311imylv	Sizes	\$110.66
Impact Socket set	Snap on 315immylm	Needed	\$143.93
½ Impact Gun	Snap on im6500hp		\$276.75
3/8 Impact Gun	Snap on im31a		\$243.71
Booster Cables	Snap on bc12500		\$66.71
Master Puller Set	Snap on cj2000sb		\$2,115.71
Micrometer Set	Snap on mic103a		\$135.64
Micrometer and Caliper Set	Snap on miccal6		\$194.06
Oil Filter Pliers	Snap on ya4050b		\$26.93
Oxy-Acetyline Set	Snap on we250	Torch kit, cutting tip .01, hose 25ft 3/16 dual lined, rosebud size 8, brazen tips, striker, check valves and gauges.	\$420.71

Parts Washer	Snap on pbc33		\$1,621.05
Extractor set	Snap on rex15a		\$41.18
Snap ring pliers	Snap on prh406		\$127.74
Soldering Kit (350w)	Snap on r460b		454.11
Soldering Iron (25w)	Snap on r25a		\$22.68
Spark Plug Boot Pliers	Snap on ya824b		\$12.56
Tap and Die set US	Snap on td2425		\$140.78
Tap and Die set Metric	Snap on tdm117a		\$156.83
Temperature Gun	Snap on rtemp30pba		\$217.46
Air Chuck	Snap on ga296		\$2.81
Utility light	Snap on ecu415bk		\$53.27
Quick Disconnect set	Snap on act1370		\$13.91
Drill bit set	Snap on db129c	29 pc.	\$127.46
Valve Core Removal Tool	Snap on act1290a		\$7.84
Vernier Caliper US/Metric	Snap on cm6421		\$54.90
File Cabinets	KCI 094dleg		\$225.00
Thread Repair Insert	Snap on hel5625		\$268.24
Terminal Tool Kit	Snap on tt600		\$31.46

\$35,401.50 Estimated Total for Lab Tools.

MOTORCYCLE SPECIALTY TOOLS:

10 Spline Ratcheting Wrench KAS9794

\$43.25

Kastar 10 spline ratcheting wrench for Evolution® 1340cc crankshafts

6" Spline Ratchet Wrench - KAS9793

\$32.25

6" Spline Ratchet Wrench

A Motorcycle Diagnostic Scan Tool Kit MS5650

\$3,250.50

Motorcycle Scanner

All Terrain Vehicle Valve Seat Cutting Kit AKS-606-2010

\$345.99

All Terrain Vehicle Valve Seat Cutting Kit

Analyser Hand Held 4 or 5 Gas AUTO4-2 & AUTO5-2

Starting at \$3,200.00

Portable Hand Held 4 or 5 Gas Analyser

BDM Scan Tool BSEBED31022

\$2,550.00

Scan Tool 2000 Harley Davidson

Bearing Driver AKS-314-1000

\$278.15

Bearing Drive

Bearing Remover Set KLK-31-3

\$446.99

Bearing Remover Set KLK-31-3

Benchtop English Wheel 22" Throat

\$699.99

Benchtop English Wheel 22" Throat

Bore Gauge KD-3-1

Our low price: Starting at \$212.99

Bore Gauge KD-3-1

Chain Cutter & Riveter KL-11-34

Our low price: \$155.45

Chain Cutter & Riveter KL-11-34

Clutch Center Holder AKS-212-1000

Our low price: Special order only

Clutch Center Holder

Clutch Disassembly/Assembly Kit 2K-07-S02

Our low price: \$168.99

Clutch Disassembly/Assembly Kit

Compression Tester Kit AKS-629-2020

\$145.70

Compression Tester Kit

Crank Assembly/Disassembly Kit 2K-07-S03

Our low price: \$419.99

Crank Assembly/Disassembly Kit

Dial Gauge KF-14-4

\$99.94

Dial Gauge KF-14-4

Digital Engine Tachometer KE-1-5

\$461.54

Digital Engine Tachometer

Digital Engine Tachometer KE-1-7

\$245.99

Digital Engine Tachometer

Disk Brake Caliper Piston Compressor 4K-F-20

\$107.68

Disk Brake Caliper Piston Compressor

Float Level Gauge AKS-229-1010

\$42.99

Float Level Gauge

Flywheel & Rotor Puller 071000

\$35.99

Flywheel & Rotor Puller -For use on rotors with thread diameters of 10mm x 1.25, 14mm x 1.5, 24mm x 1.0, and 27mm x 1

Flywheel Holder 021020L

\$55.99

Prevents rotation of flywheel and drive sprockets while making repairs

Fork Seal Driver KLK-64-100

\$275.70

Fork Seal Driver-Replaces the fork seals without removing inner fork tubes from the triple clamp

Fork Tube Seal Installer - KAS-400

\$316.95

Use to install front fork seals on Harley-Davidson® motorcycles with 35mm,39mm and 41mm fork tubes

Hand Reamer Set KM-3-91D

\$71.50

Hand Reamer Set -This set is used to clean and check carburetor jets

Harley Davidson Valve Seat Cutting Kit KM2451

\$926.00

Harley Davidson Valve Seat Cutting Kit

Ignition Timing Tester Buzz Box KEK-50-4N

\$123.04

Ignition Timing Tester Buzz Box KEK-50-4N

Infrared Thermometer AKS-329-3030

\$210.99

Infrared Thermometer AKS-329-3030

Intake Manifold Wrench

\$34.72

Intake Manifold Wrench

Loading Ramp AKS-340-1000

\$174.95

Loading Ramp AKS-340-1000

Lock Nut Set 060003

\$125.72

Variety of lock nuts used on motorcycle engines and chassis

Locknut Wrench AKS-211-2000

\$80.85

Locknut Wrench -Release front fork on motorcycles

MDX-300 12 Volt Battery/Charging System Tester

\$493.75

MDX-300 12 Volt Battery/Charging System Tester

Motorcycle Compression Tester Kit OTC5604

\$115.99

Motorcycle Compression Tester Kit

MOTORCYCLE DOLLY M998030

\$319.99

MOTORCYCLE DOLLY, 900 LB. CAPACITY

Motorcycle Jack OME49154

\$199.99

Hydraulic Motorcycle/ATV Jack

Motorcycle Jack OTC1545

\$147.13

1,500 lb Motorcycle/ATV Lift

Motorcycle Lift AB600

Motorcycle Lift AB600

Motorcycle Lift RML-600

\$1,396.00

Pneumatic Motorcycle Lift Platform

Motorcycle Rim Clamp Tire Changer

\$3,995.00

Coats Ultimate Rim Clamp Motorcycle Tire Changer

Motorcycle static balancer

\$201.50

Motorcycle static balancer

Motorcycle timing gauge CEN6491

\$181.99

Central Tools Motorcycle Timing Gauge

Motorcycle Tire Changer AKS-260-T523

\$1,975.00

Motorcycle Tire Changer AKS-260-T523

Motorcycle/RTV Jack SUN6615

\$187.99

Hydraulic Motorcycle and ATV Lift - 1500 Lb. Capacity

Multi Carburetor Vacuum Tester Gauge

\$365.99

Multi-Carb Vacuum Tester KEK-55-64

\$499.99

Multi-Carb Vacuum Tester - 4 cylinder

Nitrogen Charging Regulator AKS-219-2000

\$219.68

Nitrogen pressure system. Checks and fills gas charged shocks on most off road models with single shock rear suspension

Oil Filter Wrench 4K-E-05

\$34.99

Oil Filter Wrench

Piston Cup Installer 2K-L-25

\$41.40

Piston Cup Installer 2K-L-25

Piston Pin Clip Installer 2K-L-30

\$107.99

Piston Pin Clip Installer

Plug Cable Pliers KL-7-32

\$33.81

Plug Cable Pliers KL-7-32

REAR WHEEL STAND AKS-260-RD17

\$112.52

REAR WHEEL STAND

Rocker Box Cover Ratcheting Bolt Wrench KAS6529

\$40.66

Ratcheting Bolt Wrench for Harley-Davidson® Rocker Box Covers

Rotor Caliper KF-14-5

\$167.27

Rotor Caliper KF-14-5

Rotor Puller AKS-213-1010

\$39.99

Motorcycle Rotor Puller

Stand Center AKS-282-201D

\$247.02

Universal center stand that lifts to 18 high

Stand Front Wheel AKS-260-FD10

\$97.10

Universal stand locates under the front forks.

T-Handle Spark Plug Wrench

Starting at \$36.99

T-Handle Spark Plug Wrench

T-Handle Square Drivers

Starting at \$15.99

T-Handle Square Drivers

T-Handle Wrenches for Dirtbike repair

\$59.71

T-Handle Wrenches -7 pc

Timing Cap Wrench AKS-211-1000

\$45.10

Timing Cap Wrench AKS-211-1000

Tire Gauge KF-2-24LB

\$145.11

Tire Gauge KF-2-24LB

Valve Seat Cutter AKS-606-2020

\$1,243.00

Valve Seat Cutter AKS-606-2020

Valve Seat Kit AKS-606-2030

\$654.80

Ducati Valve Seat Kit

Valve Spring Compressor

\$99.99

Valve Spring Compressor

Valve Spring Compressor Attachment Kit

\$171.60

Valve Spring Compressor Attachment Kit

10mm spark plug Motorcycle Colortune 19-4172-100

\$64.95

Colortune Spark Plug to assist in obtaining proper fuel mixture

12mm spark plug Motorcycle Colortune 33-4171-100

\$64.95

Colortune Spark Plug to assist in obtaining proper fuel mixture

Oil Drain 27073

\$499.00

Motorcycle Oil Drain

Battery Powered Timing Light KE-50-7

\$139.99

Battery Powered Timing Light

Timing Light ATD5598

\$83.08

Timing Light Self-Powered

\$29,887.78 Estimated Total for Specialty Tools

Total Estimate for Tools:

\$75,486.14